

We Claim:

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1. A method of inhibiting an unwanted angiogenic condition in a mammal in need thereof comprising treating the mammal with an effective amount of an immunogen that causes an immune response against a molecule that induces angiogenesis in the mammal.

2. The method of claim 1 wherein the unwanted angiogenic condition is tumor growth.

3. The method of claim 1 wherein the unwanted angiogenic condition is arthritis.

4. The method of claim 1 wherein the unwanted angiogenic condition is macular degeneration.

5. The method of claim 1 wherein the unwanted angiogenic condition is psoriasis.

6. The method of claim 1 wherein the mammal is a human.

7. The method of claim 1 wherein the immunogen is an antigen that is native to the mammal, and that is modified to improve immunogenicity.

8. The method of claim 7 wherein the antigen is a haptenized antigen.

9. The method of claim 7 wherein the antigen is conjugated to an immunogenic compound.

10. The method of claim 7 wherein the antigen is combined with an adjuvant.

11. The method of claim 1 wherein the immunogen is bound to a MHC Class I Restricted Antigen forming a complex not native to the mammal.

12. The method of claim 1 wherein the immunogen is bound to a MHC Class II Restricted Antigen forming a complex not native to the mammal.

Arb 2 13. The method of claim 7 wherein the antigen is substantially purified.

14. The method of claim 1 wherein the immunogen is an anti-idiotypic monoclonal antibody.

15. The method of claim 1 wherein the immunogen is a synthetic peptide not native to the mammal.

16. The method of claim 1 wherein the immunogen is a small molecule not native to the mammal.

Arb 3 17. The method of claim 1 wherein the immunogen is expressed on an antigen-presenting cell not native to the mammal.

18. The method of claim 17 wherein the antigen-presenting cell is a dendritic cell.

19. The method of claim 1 wherein the immunogen is a nucleic acid molecule not native to the mammal.

20. The method of claim 1 wherein the a molecule that induces angiogenesis is FLK-1.

Arb B-4 21. The method of claim 1 wherein the a molecule that induces angiogenesis is KDR.

22. The method of claim 1 wherein the a molecule that induces angiogenesis is FLT-1.

23. The method of claim 1 wherein the a molecule that induces angiogenesis is VEGF.

24. The method of claim 1 wherein the a molecule that induces angiogenesis is a Vascular Endothelial Cadherin.

25. The method of claim 1 wherein the a molecule that induces angiogenesis is TIE-1.

26. The method of claim 1 wherein the a molecule that induces angiogenesis is TIE-2/Tek.

27. The method of claim 1 wherein the a molecule that induces angiogenesis is an integrin.

28. The method of claim 27 wherein the integrin is alphaVbeta3.

29. The method of claim 1 wherein the a molecule that induces angiogenesis is bFGF.

30. The method of claim 1 wherein the a molecule that induces angiogenesis is vitronectin.

31. An immunogen that mimics a mammalian angiogenic molecule wherein the immunogen not native to the mammal.

32. The immunogen of claim 31, wherein the immunogen is an anti-idiotypic

antibody.

33. The immunogen of claim 31, wherein the immunogen is an isolated peptide.

34. The immunogen of claim 31, wherein the immunogen is an isolated small molecule.

35. The immunogen of claim 31, wherein the immunogen is a nucleic acid molecule.

36. The immunogen of claim 31, wherein the immunogen is an antigen-presenting cell.

37. The immunogen of claim 36, wherein the antigen-presenting cell is a dendritic cell.

38. The immunogen of claim 31, wherein the immunogen is a MHC Class I Restricted Antigen complex.

39. The immunogen of claim 31, wherein the immunogen is a MHC Class II Restricted Antigen complex.

40. The immunogen of claim 32, wherein the antibody is monoclonal.

41. The immunogen of claim 40, comprising a fragment of the monoclonal antibody.

42. A cell which produces the anti-idiotypic antibody of claim 40.

43. A cell of claim 42 that is a hybridoma.



44. A polypeptide comprising an amino acid sequence that is substantially the same as, the amino acid sequence of the variable region of the monoclonal antibody of claim 40, and that has the same binding specificity.

45. A nucleic acid that encodes the hypervariable region of the antibody of claim 40.

46. A nucleic acid that encodes the polypeptide of claim 44.

47. A nucleic acid that hybridizes under stringent conditions to the nucleic acid of claim 45 and that encodes a polypeptide having the same binding specificity as the hypervariable region encoded by the nucleic acid of claim 45.

48. A chimeric antibody comprising the polypeptide of claim 44.

49. A chimeric antibody of claim 48 comprising an amino acid sequence of a human antibody constant region and an amino acid sequence of a non-human antibody variable region.

50. A chimeric antibody of claim 49, wherein the non-human variable region is murine.

51. A polypeptide which comprises an amino acid sequence which is substantially the same as the amino acid sequence of the hypervariable region of the monoclonal antibody of claim 40 and that has the same binding specificity.

52. A nucleic acid that encodes the polypeptide of claim 51.

53. A humanized antibody or a fragment thereof comprising the polypeptide of claim 51.

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54. The humanized antibody of claim 53 comprising amino acid sequences of framework and constant regions from a human antibody, and an amino acid sequence of a non-human antibody hypervariable region.

55. The humanized antibody of claim 54, wherein the amino acid sequence of the hypervariable region is murine.

56. A method of inhibiting an unwanted angiogenic condition in a mammal in need thereof comprising treating the mammal with an effective amount of a vector that expresses an immunogen that causes an immune response against a molecule that induces angiogenesis in the mammal.